

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Yoichiro Sako and Shigeyuki Yoneyama
Serial No. : Continuation of 09/610,783
For : SIGNAL
REPRODUCING/RECORDING/TRANSMITTING
METHOD AND APPARATUS AND SIGNAL
RECORDING MEDIUM
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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to examination of the above-referenced Continuation application, please
amend the application as follows.

IN THE SPECIFICATION

On page 1, please delete lines 2-4.

On page 1, after line 1, please insert the following:

-- This application is a continuation of co-pending U.S. patent application no. 09/610,783, which is hereby incorporated by reference, which was filed on July 6, 2000 and which is a continuation-in-part of U.S. patent application no. 08/690,224, which was filed on July 19, 1996.--

IN THE CLAIMS

Please cancel claims 1-58.

Please add new claims 59-123 as follows:

--59(new). A method for reproducing digital data from a signal source, comprising the steps of:
reading out recording control information supplied by said source, said recording control information indicating the playback mode of said source; and
performing a pre-set conversion operation on said digital data and/or an analog signal generated from said digital data, based on said recording control information.

60(new). The method according to claim 59, wherein said digital data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks.

61(new). The signal reproducing method as claimed in claim 59, wherein the pre-set conversion operation on said digital data is a digital descrambling operation.

62(new). The signal reproducing method as claimed in claim 61, wherein said digital data is ciphered data and said pre-set conversion operation on said digital data includes an operation of deciphering said digital data using key information derived from information used to generate said ciphered data.

63(new). The signal reproducing method as claimed in claim 62, wherein said source is a disc-shaped recording medium and said key information is recorded at a pre-set position of said recording medium.

64(new). The signal reproducing method as claimed in claim 63, wherein said digital data is partitioned into units and at least one of said units is recorded at said pre-set position.

65(new). The signal reproducing method as claimed in claim 64, wherein said at least one unit is located in a lead-in area and/or a program area of said recording medium.

66(new). The signal reproducing method as claimed in claim 65, wherein said at least one unit is placed in a header area of said program area.

67(new). The signal reproducing method as claimed in claim 62, wherein said source is an Integrated Circuit (IC) recording medium and said key information is recorded at a pre-set position of said recording medium.

68(new). The signal reproducing method as claimed in claim 67, wherein said digital data is partitioned into units and at least one of said units is recorded at said pre-set position.

69(new). The signal reproducing method as claimed in claim 68, wherein said at least one unit is located in a lead-in area and/or a program area of said recording medium.

70(new). The signal reproducing method as claimed in claim 69, wherein said at least one unit is placed in a header area of said program area.

71(new). The signal reproducing method as claimed in claim 59, wherein said digital data is ciphered video and/or audio data and said pre-set conversion operation on said digital data is an operation of deciphering the digital data using at least a portion of the recording control information.

72(new). The signal reproducing method as claimed in claim 59, wherein said digital data is ciphered video and/or audio data and said pre-set conversion operation on said digital data includes an operation of deciphering said digital data according to decoding means specified by at least a portion of said recording control information.

73(new). The signal reproducing method as claimed in claim 59, wherein said analog signal is an analog video signal and wherein the pre-set conversion operation includes arraying a combination signal of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal.

74(new). The signal reproducing method as claimed in claim 59, wherein said analog signal is an analog color video signal and wherein said pre-set conversion operation includes changing the phase of at least a portion of a color burst signal associated with said color video signal.

75(new). The signal reproducing method as claimed in claim 59, wherein the pre-set conversion operation includes arraying a signal coded with plural bits at a pre-set position in said analog signal.

76(new). The signal reproducing method as claimed in claim 75, wherein said analog signal is an analog video signal and said pre-set position is a predetermined horizontal period within a vertical blanking period of said analog video signal.

77(new). The signal reproducing method as claimed in claim 75, wherein said coded signal includes a recording limitation signal indicating a limitation on recording.

78(new). A method for reproducing digital video data from a signal record medium, comprising the steps of:

detecting recording control information from said video signal record medium, said recording control information indicating the playback mode of said record medium; and performing a pre-set conversion operation on an analog video signal and/or said digital video data, based on the detected recording control information, wherein said pre-set conversion operation on said analog video signal includes arraying a combination of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a

vertical blanking period of said analog video signal, and wherein said digital video data is ciphered data and said pre-set conversion operation on said digital video data includes deciphering said digital video data using key information.

79(new). The signal reproducing method as recited in claim 78, wherein said pre-set conversion operation further includes changing the phase of at least a portion of a color burst signal associated with said analog video signal and/or a digital video data.

80(new). The signal reproducing method as recited in claim 78, wherein said pre-set conversion operation includes arraying a signal coded with plural bits at a pre-set position in said analog video signal, said signal coded with plural bits being a recording limitation signal indicating a limitation on recording.

81(new). The signal reproducing method as recited in claim 78, wherein said digital video data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks.

82(new). The signal reproducing method as claimed in claim 81, wherein at least one of said sectors or blocks is placed in a lead-in area and/or a program area of said recording medium.

83(new). The signal reproducing method as claimed in claim 82, wherein said recording control information includes key information derived from information used to generate said ciphered data.

84(new). The signal reproducing method as claimed in claim 83, wherein said key information is placed into said sectors or blocks of said lead-in area and/or said program area.

85(new). The signal reproducing method as claimed in claim 83, wherein said key information is placed into a header area of said program area.

86(new). An apparatus for reproducing digital data from a signal source, comprising:

means for reading out recording control information supplied by said signal source, said recording control information indicating the playback mode of said source; and

means for performing a pre-set conversion operation on said digital data and/or an analog signal generated from said digital data, based on said recording control information.

87(new). The apparatus according to claim 86, wherein said digital data is partitioned into sectors or blocks and said recording control information is included in at least one of said sectors or blocks.

88(new). The apparatus as claimed in claim 86, wherein said digital data is digital audio and/or digital video data, and wherein said pre-set conversion operation is performed on said audio and/or video data based on said recording control information.

89(new). The apparatus as claimed in claim 88, wherein said pre-set conversion operation on said digital data is a digital descrambling operation.

90(new). The apparatus as claimed in claim 89, wherein said digital data is ciphered data and said pre-set conversion operation on said digital data includes an operation of deciphering said digital data using key information derived from information used to generate said ciphered data.

91(new). The apparatus as claimed in claim 90, wherein said source is a disc-shaped recording medium and said key information is recorded at a pre-set position of said recording medium.

92(new). The apparatus as claimed in claim 91, wherein said digital data is digital audio and/or digital video data, wherein said digital data is partitioned into sectors or blocks, and wherein said recording control information is included in at least one of said sectors or blocks.

93(new). The apparatus as claimed in claim 92, wherein said at least one sector or block is located in a lead-in area and/or a program area of said recording medium.

94(new). The apparatus as claimed in claim 93, wherein said at least one sector or block is placed in a header area of said program area.

95(new). The apparatus as claimed in claim 90, wherein said source is an Integrated Circuit (IC) recording medium and said key information is recorded at a pre-set position of said recording medium.

96(new). The apparatus as claimed in claim 95, wherein said digital data is digital audio and/or digital video data, wherein said digital data is partitioned into sectors or blocks, and wherein said recording control information is included in at least one of said sectors or blocks.

97(new). The apparatus as claimed in claim 96, wherein said at least one sector or block is located in a lead-in area and/or a program area of said recording medium.

98(new). The apparatus as claimed in claim 97, wherein said at least one sector or block is placed in a header area of said program area.

99(new). The apparatus as claimed in claim 88, wherein said digital data is ciphered data and said pre-set conversion operation on said digital data is an operation of digitally deciphering said digital data.

100(new). The apparatus as claimed in claim 88, wherein said digital data is ciphered data and said pre-set conversion operation on said digital data is an operation of deciphering said digital data according to decoding means specified by at least a portion of said recording control information having key information.

101(new). The apparatus as claimed in claim 86, wherein said analog signal is an analog video signal and wherein said pre-set conversion operation includes arraying a combination signal of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal.

102(new). The apparatus as claimed in claim 86, wherein said analog signal is an analog color video signal and wherein said pre-set conversion operation includes changing the phase of at least a portion of a color burst signal associated with said color video signal.

103(new). The apparatus as claimed in claim 86, wherein said pre-set conversion operation involves arraying a signal coded with plural bits at a pre-set position in the analog signal.

104(new). The apparatus as claimed in claim 103, wherein said analog signal is an analog video signal and said pre-set position is a predetermined horizontal period within a vertical blanking period of said analog video signal.

105(new). The apparatus as claimed in claim 103, wherein said signal coded with plural bits includes a recording limitation signal indicating a limitation on recording.

106(new). A method for recording a signal, comprising the steps of:

generating recording control information for supervising recording of said signal on a signal record medium;

compressing said signal to generate a compressed signal;

ciphering said compressed signal according to key information to generate a ciphered signal, wherein said key information is used for deciphering said ciphered signal when said ciphered signal is reproduced;

arraying said recording control information at a pre-set position of said signal record medium, such that when a second record medium is generated by replicating said record medium, said recording control information indicates the playback mode of said second record medium during analog reproduction of said signal from said second record medium by a reproducing apparatus; and

recording on said signal record medium said ciphered signal at a program area of said record medium, and recording at said pre-set position of said record medium analog copy protection bits and said key information as said recording control information.

107(new). The method according to claim 106, wherein said digital data is partitioned into units and said recording control information is included in at least one of said units.

108(new). The method according to claim 107, wherein said at least one unit is placed in a lead-in area and/or said program area of said recording medium.

109(new). The method according to claim 107, wherein said record medium is a disc-shaped record medium.

110(new). The method according to claim 107, wherein said record medium is an Integrated Circuit (IC) record medium.

111(new). A signal recording apparatus comprising:

recording control information generating means for generating recording control information for supervising the recording of said signal on a signal record medium;

compressing means for compressing said signal to generate a compressed signal;

ciphering means for ciphering said compressed signal using key information, wherein said key information is used for deciphering said ciphered signal when said ciphered signal is reproduced;

annexing means for annexing said recording control information at a pre-set position of said signal record medium, such that when a second record medium is generated by replicating said record medium, said recording control information indicates the playback mode of said second record medium during analog reproduction of said signal from said second record medium by a reproducing apparatus; and

recording means for recording on said signal record medium said ciphered signal at a program area of said record medium, and for recording on said signal record medium analog copy protection bits and said key information as said recording control information such that said analog copy protection bits and said key information are arrayed at said pre-set position of said record medium.

112(new). The apparatus according to claim 111, wherein said digital data is partitioned into units and said recording control information is included in at least one of said units.

113(new). The apparatus as claimed in claim 112, wherein said at least one unit is located in a lead-in area and/or said program area of said record medium.

114(new). The apparatus as claimed in claim 113, wherein said key information is placed in a header area of said program area.

115(new). The apparatus as claimed in claim 111, wherein said analog signal is an analog video signal having a combination signal of plural pseudo synchronization pulses and plural white peak signals included across plural horizontal periods in a vertical blanking period.

116(new). The apparatus as claimed in claim 111, wherein said analog signal is an analog color video signal having an associated color burst signal and wherein the phase of at least a portion of said color burst signal is changed from an original state.

117(new). The apparatus as claimed in claim 111, wherein said analog signal is an analog video signal including a signal coded with plural bits at a pre-set position and wherein said signal coded with plural bits includes a recording limitation indicating a limitation on recording.

118(new). A digital signal record medium, comprising:

a program area for storing a ciphered signal generated by ciphering a signal with key information;

a pre-set portion of said program area for storing playback mode control information, said playback mode control information being indicative of a pre-set conversion operation on an analog signal generated from said signal;

a lead-in area for storing said playback mode control information, as an alternative to storing said playback mode control information in said pre-set portion of said program area; and

a header area portion of said program area and/or said lead-in area for storing said key information for use in deciphering said ciphered signal.

119(new). The record medium as claimed in claim 118, wherein said pre-set portion of said program area is partitioned into a plurality of recording units.

120(new). The record medium as claimed in claim 118, wherein said analog signal is an analog video signal and wherein said playback mode control information indicates arraying a combination signal of plural pseudo synchronization pulses and plural white peak signals across plural horizontal periods in a vertical blanking period of said analog video signal.

121(new). The record medium as claimed in claim 118, wherein said analog signal is an analog color video signal and wherein said playback mode control information indicates changing the phase of at least a portion of a color burst signal associated with said color video signal.

122(new). The record medium as claimed in claim 118, wherein said analog signal is an analog video signal and wherein said playback mode control information indicates arraying a signal coded with plural bits at a pre-set position in said analog video signal.

123(new). The record medium as claimed in claim 118, wherein said record medium is an optical disc medium and said pre-set portion of said program area is located at a beginning portion of at least one recording track on said medium.

REMARKS

This Amendment is submitted prior to examination of the above-identified Continuation application. Claims 1-58 were pending in the parent application. In this Amendment, claims 1-58 have been canceled, and new claims 59-123 have been added. Claims 59-123 thus remain for consideration.

Early and favorable consideration by the Examiner is respectfully requested.


The Examiner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account No. 50-0320.

The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,

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